Satisfaction with ready-made garments among people with mobility impairments (PWMIs) in Ghana

Elizabeth Arthur[1]
Modesta Efua Gavor[2]
Doreen Tetteh Coffie[3]

[1]elizabtharthur26@gmail.com
[2]mgavor@ucc.edu.gh
[3]dtettehcofie@ucc.edu.gh

[1,2,3]University of Cape Coast, Ghana

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ABSTRACT

This study assessed the satisfaction levels of the attributes of ready-made garments used by Persons with Mobility Impairments (PWMIs) in the Komenda Edina-Eguafo-Abrem (KEEA) municipality, Ghana. Based on the Functional, Expressional and Aesthetic (FEA) Consumer Needs Model, the study adopted the descriptive survey design and collected data from 201 respondents in Enyindakrom, Kissi, Elmina, Besease, and Komenda. Questionnaires and interview guides served as the primary instruments for data collection. Data were analyzed quantitatively using SPSS version 25.0 and employed frequency counts, and percentages, while interview guide responses were analyzed qualitatively to support the findings. The results revealed that PWMIs are generally dissatisfied with garment attributes, including durability, attractiveness, managing fasteners and zippers, ease of putting on and taking off, movement, style, comfort, and fit. Based on these findings, it is recommended that PWMIs be educated on garment attributes to make informed choices when selecting fabrics and clothing with special qualities to meet their conditions, needs, and interests, ensuring improved satisfaction and usability.

Keywords: Clothing, Disability, Donning and Doffing, Functionality of a Garment, Mobility Impairment

I. INTRODUCTION

Mobility impairment refers to the inability to use one or more extremities, and the lack of strength to walk, grasp, or lift objects, due to varying conditions of physical disorders (Bobila, 2016). Studies show that a variety of factors, including disease, an accident, or a congenital issue, as well as neuromuscular and orthopedic abnormalities, spinal cord damage, paralysis, muscular dystrophy, and cerebral palsy, are some of the indicated conditions (Brault, 2012). Mobility impairment could again be acquired with age problems (Lazear et al., 2016). World Health Organization's 2018 report indicated, that there are about 600 million people worldwide who have mobility issues. This, however, equates to roughly 10% of the world's population. Only about 20% are found in developed countries, whereas more than 80% are found in underdeveloped countries. According to Asuman et al. (2021), Ghana's disability population is estimated to be between 7% and 10% and still growing. Records, on the other hand, show that persons with mobility impairments are poor and are being marginalized within their respective communities in Ghana. Most of these people cannot access public health, education, and other social services (Asante & Sasu, 2015). They are socially excluded, deprived, and in low social positions among people in general.

Research shows that people with mobility impairments are largely excluded from development processes, with few possibilities to participate in public dialogues and decision-making in society (Soldatic et al., 2014). It is established that a person level of mobility and reliance on others vary, depending on their sickness (Schwarzer et al., 2011). In Ghana, people with mobility issues are frequently observed walking on their knees, hands, or buttocks, while others are bedridden. Few people with mobility impairment are seen to be lucky enough to move around with the help of quality assistive equipment or mobility aids including crutches, canes, wheelchairs, and artificial limbs (Simpson, 2018).

There are indicators of many laws and rights, protecting persons with disabilities, but little has been done in terms of enforcing these laws and rights (Agyire-Tettey et al., 2019). The needs of the people with disability have been ignored. They have difficulties in building a social network and gaining positive social attention, resulting in the creation of a social stigma (Tang & Wu, 2012). Clothing serves not only the purpose of covering the body but also beautifying the body. However, many disabled people have been ignored in this regard. One can imagine how a person with only

one arm may easily button his/her shirt. What if he/she receives food through a feeding tube implanted in his stomach? Meaning, wearing that regular dress means he/she cannot eat in public.

People with mobility impairment in Ghana are largely noted for wearing garments generally available in the market, which, of course, do not meet their special needs. Clothing is such a basic and intimate need, which has an impact on how we are perceived by others, as well as how we think about ourselves (Leary, 2019). Therefore, it is important to restore the independence and dignity of dressing to people with disabilities in Ghana, by helping them to discover garments that fit their needs, including their lifestyle to be better integrated into the society.

The government of Ghana has provided legislation to support people with disabilities to gain improved access to employment, public facilities, and reasonable accommodations (Asante & Sasu 2015). This could likely result in higher admission in schools, increase opportunities in the workforce, and create participation in various public activities for people with disabilities in this country, this in turn, calls for a greater need for appropriate garments, so PWD can experience greater inclusion in the society (Kabel et al., 2017). This perceived clothing need necessitated the study to be conducted to assess the satisfaction levels of ready-made garments used by people with mobility impairments (PWMIs) in the KEEA Municipality.

1.1 Statement of the Problem

People with mobility impairments often face many challenges in their daily lives, but one challenge that is often overlooked is their clothing. Well-fitted garments can do more than just cover the body; they can help boost self-confidence, promote independence, and improve quality of life (McBee-Black & Ha-Brookshire, 2018; Lazear et al., 2016). For children especially, the right clothing can help them become more self-sufficient and feel better about themselves. However, in Ghana, and particularly in the Komenda-Edina-Eguafo-Abrem (KEEA) Municipality, many people with mobility impairments struggle to find suitable clothing. Many of these individuals move around on their knees, hands, or buttocks, or rely on devices like crutches, canes, wheelchairs, or artificial limbs (Simpson, 2018). Unfortunately, the clothing available in local markets rarely meets their needs.

Most clothes sold in Ghana are made for people without disabilities (Hall & Lobo, 2018). This means that people with mobility impairments often have no choice but to wear clothes that do not fit their unique body shapes or movement needs (Addo & Amissah, 2020). Wearing ill-fitting clothes can do more than cause discomfort, it can limit movement, worsen mobility challenges, and lower self-esteem. Even more concerning, research shows that in Ghana, little attention has been given to designing garments specifically for people with mobility impairments. Yet this population continues to grow and often has special clothing requirements (Magnusson et al., 2020). For example, some people may need clothing that conceals medical devices, such as a urinary reservoir, while others may have body shapes that do not match standard sizes (Stokes & Black, 2012). Without appropriate clothing, many may feel uncomfortable or struggle to move freely.

One major issue is that the clothes on the Ghanaian market are based on traditional sizing systems (Hamraie, 2016). However, most people with mobility impairments do not fit these standard body measurements. Long hours of sitting or lying down can change body posture and dimensions, such as causing the spine to curve or swell abnormally (Sau-Fun et al., 2011; Simpson, 2018). As a result, off-the-rack garments often do not fit properly, especially in communities like the KEEA Municipality. This raises a critical question: Do traditional garments provide the comfort, mobility, and ease of dressing that people with mobility impairments need? The reality is that they often do not. Many people try to alter their clothes after buying them, hoping to improve comfort and fit (Gawain, 2016). However, even with alterations, these garments rarely meet all their needs.

People with disabilities do not want clothing that is purely functional but poorly fitting or unattractive. They want clothes that help them in their daily activities while also making them feel good and look good in society (Crickmay et al., 2004; Hall & Lobo, 2018). Although Ghana's Disabilities Act 2006 has helped people with disabilities gain better access to education, jobs, and public life (Asante & Alexander, 2015), appropriate clothing remains an overlooked part of inclusion. As people with disabilities participate more in school, work, and social activities, their need for suitable clothing becomes even more important (Kabel et al., 2017).

Hoffman (2007) emphasizes that functional clothing should not only address practical needs but should also help highlight the wearer's strengths and reduce their limitations. Well-designed garments can help preserve dignity, improve self-image, and boost confidence. They can also make dressing easier, which reduces strain on caregivers (Bobila, 2016). For these reasons, this research seeks to ascertain the difficulties people with disability face when purchasing clothing and their level of satisfaction for clothes they wear.

1.2 Research Objectives

i. To examine the specific difficulties people with disabilities face when purchasing clothing.
ii. To assess the satisfaction of persons with disabilities regarding general clothing attributes.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 The FEA Consumer Needs Model

The Functional, Expressional and Aesthetic (FEA) Consumer needs model underpins this research. The model was designed to investigate the clothing needs for non-traditional body types (Lamb & Kallal, 1992). The FEA model makes use of "Functional, Expressive and Aesthetic elements to recognize consumer needs and wants. The model is considered as a problem-solving approach that does not distinguish between functional and fashion apparel design. The FEA Consumer Needs Model was introduced as a simple teaching tool to facilitate preparing student designers to understand the needs of the consumer of their products. Its usage has gone beyond its fundamental purpose of preparing student designers to include the use as a theoretical framework, by practicing designers and design scholars" (Orzada & Kallal, 2016, pg. 391-392). Holland was used to investigate the needs of competitive female sailors by (2007) also used the FEA Consumers Needs Model proposed by Lamb and Kallal (1992) to recognize whether functional factors play a role in determining satisfaction of soccer uniforms. In this study, FEA Consumer Needs Model is used to investigate the clothing used by mobility impaired people in Ghana.

The Functional, Expressive, Aesthetic Consumer Needs Model (FEA Model), developed by Lamb and Kallal (1992) is made up of three separate circular layers as shown in Figure 1. The first layer is positioned in the innermost and the centre of the model which is the target customer. This component is placed in the centre because the customer is the main focus while designing. In this section, elements such as "demographics, psychographics, physical characteristics, activities, and preferences" (Lamb & Kallal 1992) are incorporated to have a better understanding of the target consumer. Lamb and Kallal (1992) emphasized that the customer's needs must be explored, analysed and identified at the beginning of the design process. This idea of customer's needs was supported by Karthik et al. (2015) that, it is more productive when a designer first understands a customer's needs, and then decodes those needs step by step in producing a final design. However, this may not apply in the ready to wear market of clothing where clothing production has been geared towards standardization and mass production in favour of people without disability. Forgetting that, people with disability, who are also clothing consumers, need to be considered and taken care of, during clothing production.

The second circular layer of the model represents the culture of the target consumer. This layer of the model is explained as: "culture acts as a mediator or filter between the intended users of apparel and their requirements or desires in their apparel items" (Lamb & Kallal, 1992 pg. 44). It has been identified earlier in the literature that, there has been no studies about the clothing needs of people with disability and their clothing desires as far as our Ghanaian culture is concerned. This, indeed shows that, clothing trends in Ghana do not recognize the total needs of people with disability in our Ghanaian culture. The third circular layer state the name and provides sub-attributes of each of the FEA elements. The arrows within the circle demonstrate the interrelationship between the functional, expressive and aesthetic elements. Although, each element is defined individually, they are not, mutually exclusive (Lamb & Kallal 1992). These three elements work together to provide an integrated framework for apparel design. This is shown in the figure 1 below.

FEA Consumer Needs Model

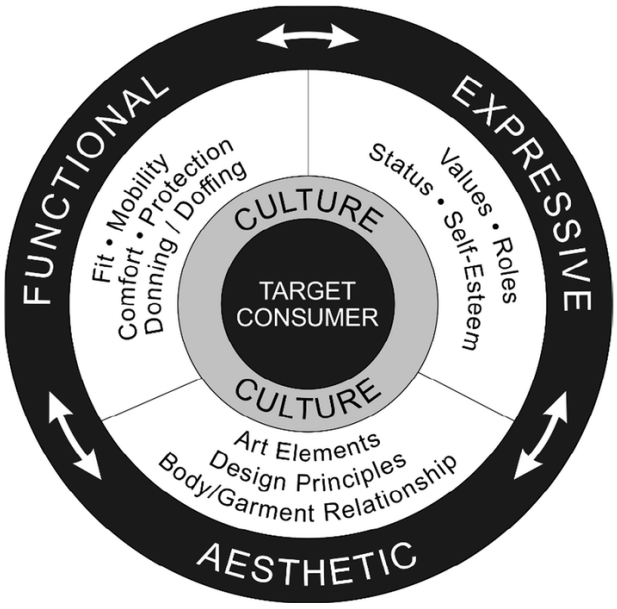

Figure 1
FEA Consumer Needs Model
Source: Lamb and Kallal (1992)

2.2 Empirical Review

2.2.1 Difficulties people with disabilities face when purchasing clothing

Numerous studies have highlighted the significant difficulties people with disabilities encounter when trying to purchase suitable clothing. Hall and Lobo (2018) argue that mainstream clothing retail rarely considers the functional needs of disabled consumers, often forcing them to adapt to clothing rather than the other way around. For instance, closures such as buttons or zippers may be hard to manage for individuals with limited dexterity, while standard hemlines and fits may restrict mobility for wheelchair users (Hoffman, 2007). In Ghana, where ready-made garments dominate the market, people with disabilities have even fewer adaptive options (Addo & Amissah, 2020).

These barriers often result in uncomfortable or unsafe clothing. Carroll and Kincade (2007) found that poorly designed garments can worsen mobility difficulties by adding pressure to sensitive areas or interfering with assistive devices like wheelchairs or prosthetics. McBee-Black and Ha-Brookshire (2018) further noted that many disabled consumers experience feelings of frustration and social exclusion when shopping for clothes that fail to meet their physical needs or reflect their style preferences. Research in other African contexts also shows that limited awareness among local tailors and designers about adaptive design worsens these problems (Opoku et al., 2019).

Additionally, the high cost of custom tailoring, lack of accessible retail spaces, and limited product ranges compound these challenges (Sau-Fun et al., 2011; Gawain, 2016). In Ghana, many people with disabilities rely on secondhand markets where altering clothes to fit their unique body shapes is often the only option. Yet alterations are not always affordable or effective, leaving wearers dissatisfied and marginalized (Simpson, 2018). These findings underline the urgent need to understand the daily shopping difficulties faced by people with disabilities to advocate for inclusive garment solutions in communities like the KEEA Municipality.

2.2.2 The satisfaction of persons with disabilities regarding general clothing attributes

Assessing the level of satisfaction of persons with disabilities with the general attributes of clothing available to them has become an important area of study in inclusive design and rehabilitation research. Many studies reveal that people with disabilities often find mainstream clothing options inadequate for their specific needs (Lamb & Kallal, 1992; Wu & Ahn, 2019). Attributes such as ease of dressing, fabric comfort, durability, and adaptability to assistive devices are central to user satisfaction (Watkins & Dunne, 2015). When these attributes are lacking, individuals may feel frustrated and experience barriers to independence, highlighting why it is vital to understand their satisfaction levels to inform better design solutions.

Existing literature highlights that fit and comfort are two of the most significant contributors to satisfaction among persons with disabilities. According to Carroll and Kincade (2007), ill-fitting clothing can restrict mobility and even cause health complications such as skin abrasions or pressure sores, especially for wheelchair users or those with limited dexterity. Similarly, Karthik et al. (2015) notes that the tactile qualities of fabric such as softness, breathability, and hypoallergenic properties play a crucial role in how satisfied people feel with their clothing. Unfortunately, many ready-made garments fail to meet these expectations, leading to dissatisfaction and the need for costly custom alternatives.

Another major factor influencing satisfaction is the aesthetic and social aspect of clothing. Canlar (2022) argue that persons with disabilities often feel excluded from mainstream fashion trends, which affects their confidence and social participation. Studies have shown that when adaptive clothing reflects modern styles and is indistinguishable from regular garments, users report significantly higher satisfaction levels (Wallman & Enocson, 2023). Therefore, aesthetics must be seen as a fundamental attribute, not an afterthought, in designing clothing for people with disabilities.

Finally, access and affordability also impact satisfaction with available clothing. Kabel et al. (2016) emphasize that many adaptive garments remain inaccessible due to limited market availability or prohibitive costs. This lack of access to suitable clothing exacerbates the feeling of exclusion for people with disabilities. Therefore, assessing satisfaction should not only focus on garment attributes themselves but also consider whether people can realistically obtain and afford clothing that meets their functional and psychosocial needs. Such insights are vital for guiding designers, policymakers, and retailers to develop inclusive solutions that truly enhance the quality of life for persons with disabilities.

III. METHODOLOGY

3.1 Study Area

The study area is the Komenda-Edina-Eguafo-Abrem (KEEA) Municipal Assembly, located in the Central Region of Ghana. It is comprised of four traditional areas, Komenda, Edina, Eguafo, and Abrem which together form the municipality with its capital at Elmina, a renowned historic town and tourist destination in West Africa. Established in 1988 under Ghana's Decentralization Programme and elevated to municipal status in 2008 through LI 1857, KEEA covers an area of 372.45 km² and is bounded by the Atlantic Ocean to the south, Cape Coast Metropolis to the east,

Twifo Lower Denkyira District to the northeast, Wassa East District to the northwest, and Shama District to the west. The 2020 Population and Housing Census indicates a total population of 144,705, about 6.6% of the Central Region's population, with 6.3% living with some form of disability; sight disability is most prevalent (51.6%), followed by physical disability (29.2%), and females slightly outnumber males in disability prevalence, particularly in sight, physical, and emotional categories. Notably, rural areas record higher disability rates (7.0%) compared to urban areas (5.0%), with slight variations in the distribution of disability types between male and female populations across localities.

3.2 Research Design

A descriptive survey design was employed for this study, as it involves systematically gathering data to address research questions about the current state of a particular issue. Such surveys are mainly intended to describe, observe, and record elements of a situation as they naturally occur, rather than to establish cause-and-effect relationships. This design was suitable because it enabled the researcher to present an accurate picture of the situation using descriptive analytical tools such as frequencies and percentages. Additionally, the study adopted a cross-sectional approach, which allowed for data collection at a single point in time, providing a snapshot of the perceptions and experiences of persons with mobility impairments across the KEEA Municipality. To strengthen the depth and reliability of the findings, a mixed-method approach combining questionnaires and interviews was used to gather comprehensive information from respondents.

3.3 Sample Size Determination and Sampling

In this study, a multi-stage sampling procedure was employed to select respondents. Initial enquiries were made from key informants to identify the Association of Physically Challenged Persons within the KEEA Municipality and to obtain detailed information on the membership breakdown by community. In the first stage, five towns were purposively selected because they had the highest numbers of persons with mobility impairments (PWMIs), bringing the total population across these communities to 413. Based on Krejcie and Morgan's (1970) sample size determination table, a sample of 201 respondents was required. Given the variations in population sizes among the selected communities, a stratified sampling technique was then applied to ensure fair representation from each community according to the recommended proportions. Finally, in the third stage, a simple random sampling method (lottery approach) was used during community-based meetings to select individual respondents from each stratum. This approach ensured that every PWMI in the selected communities had an equal chance of participating in the study.

Table 1

Breakdown of Sample Population

S/N	Selected settlement	Population of mobility impaired	Sample six
1	Enyindakrom	92	45
2	Kissi	88	43
3	Elmina	80	39
4	Besease	80	39
5	Komenda	73	35
6	**Total**	**413**	**201**

3.4 Data Collection Instrument

For this study, both a questionnaire and an interview guide were used as data collection instruments to obtain comprehensive and complementary insights. The questionnaire, structured on a 3-point Likert scale, was divided into three (3) sections: demographic information, satisfaction with garment types, assessment of garment attributes based on the FEA (Functional, Expressive, and Aesthetic) model, clothing needs aligned with specific impairments. In addition, an interview guide was employed to gather in-depth responses that complemented and clarified the data from the questionnaire. Interviews were conducted face-to-face and guided by key research questions to elicit detailed perspectives that might not be captured through structured survey responses. The use of both tools ensured a mixed-method approach that enriched the data and enhanced the reliability and completeness of the findings.

3.5 Data Analysis

For this study, the data gathered through the questionnaire was analyzed quantitatively using the Statistical Package for Social Sciences (SPSS) version 25.0. Descriptive statistical tools such as frequency counts and percentages presented the data in a clear and meaningful way, making it possible to identify patterns and trends regarding the satisfaction levels, clothing preferences, and needs of persons with mobility impairments (PWMIs) within the KEEA Municipality. In addition, the data collected through the interview guide was analyzed qualitatively using Nvivo 21.

Interview transcripts were carefully examined and coded into emerging themes that aligned with the study objectives, providing deeper insight and context to support and explain the quantitative findings.

IV. FINDINGS & DISCUSSION

4.1 Demographic data

The demographic data showed that more than half of respondents were male (52.0%), while females constituted 48.0%. The most common age group was 46-55 years (40.8%), followed by 36-45 years (28.4%) and 26-35 years (11.9%). A smaller proportion of respondents were aged 56-65 years (9.0%), 16-25 years (6.5%), and 66+ years (3.5%). In terms of educational background, a significant majority (82.0%) had no formal education, while 15.0% had attained primary education. Only a small fraction had secondary education (2.0%) or tertiary education (0.5%), indicating low levels of formal education among the respondents.

Table 2

Demographic Characteristics of Respondents

Demographic Factor	Category	Frequency (n)	Percentage (%)
Gender	Male	105	52.0
	Female	96	48.0
Age	46-55	82	40.8
	36-45	57	28.4
	26-35	24	11.9
	56-65	18	9.0
	16-25	13	6.5
	66+	7	3.5
Educational Background	No Formal Education	165	82.0
	Primary Education	31	15.0
	Secondary Education	4	2.0
	Tertiary Education	1	0.5

4.1.1 Kind of Disability and Cause of Disability

The data indicates that the most common disability among respondents is lower limb amputation (63), followed by paralysis (59), crippled condition (45), and small/shrunk limb (34). Birth-related conditions are the leading cause of disability, affecting 92 respondents, followed by sickness (67), motor accidents (30), and old age (12). Among those with lower limb amputations, 42.86% sustained the condition from birth, while sickness (36.50%) and motor accidents (12.70%) were also significant causes. Similarly, paralysis was primarily caused by birth (47.56%) and sickness (30.51%), with motor accidents (16.95%) also contributing. A majority (51.11%) of those who were crippled developed the condition from birth, while sickness (33.33%) and motor accidents (13.34%) were other notable causes. The least common cause across all disabilities was old age, affecting a small proportion of respondents.

Table 3

Kind of Disability and Cause of Disability of Respondents

Kind of Disability	Causes				Total
	From birth	Sickness	Motor accident	Old age	
Amputation-lower limb	27 (42.86)	23 (36.50)	8 (12.70)	5 (7.94)	63
Paralysis	28 (47.56)	18 (30.51)	10 (16.95)	3 (5.08)	59
Cripple	23 (51.11%)	15 (33.33%)	6 (13.34%)	1 (2.22%)	45
Small/shrunk limb	14 (41.18)	11 (32.35)	6 (17.65)	3 (8.82)	34
Total	**92**	**67**	**30**	**12**	**201**

4.1.2 Kind of Disability and Duration of Disability

The data reveals that the majority (51.24%) of respondents have been living with their disabilities for 11-20 years, followed by 23.88% who have endured their condition for 21-30 years, and 20.40% for 41-50 years, while only 4.48% have experienced their condition for 1-10 years. Among those with lower limb amputation (63), most (65.10%) have had the condition for 11-20 years, while 20.63% have lived with it for 21-30 years. Similarly, paralysis (59 respondents) has been experienced by 47.46% for 11-20 years and 30.51% for 21-30 years. For those who are crippled (45), 44.44% have been in this condition for 41-50 years, while 35.56% have had it for 11-20 years. Among respondents

with small/shrunk limbs (34), 52.94% have had the condition for 11-20 years, and 29.41% for 21-30 years. The findings suggest that most respondents have had long-term experiences with their disabilities, implying a deep familiarity with their condition and its impact, including challenges related to clothing and garment-related issues.

Table 4

Kind of Disability and Duration of Disability

Kind of disability	**Duration (years)**				**Total**
	1-10	11-20	21-30	41-50	
Amputation-lower limb	2 (3.17%)	41(65.10%)	13(20.63%)	7(11.10%)	63
Paralysis	4 (6.78%)	28(47.46%)	18(30.51%)	9(15.25%)	59
Cripple	2 (4.44%)	16(35.56%)	7(15.56%)	20(44.44%)	45
Small/shrunk limb	1(2.94%)	18 (52.94%)	10(29.4%)	5(14.71%)	34
Total	**9**	**103**	**48**	**41**	**201**

4.1.3 Difficulties Encountered by Respondents while Purchasing Clothing

From table 4, 130 (65.0%) of the respondents reported that they are unable to fit clothing before buying them. This is followed by 39 (19.0%) who stated that they face the challenge of disregard from the shopkeepers they buy clothing from. Also, 26 (13.0%) and 6 (3.0%) of the respondents respectively reported that the clothing does not fit well sometimes and the clothing are difficult to take on and off when they want to buy for themselves. Thus, the major problem faced by the PWMIs when buying clothing for themselves is that they are unable to fit clothing before they buy.

Table 5

Difficulties Encountered by Respondents while Purchasing Clothing

Challenges in Buying Clothing	**Frequency (n)**	**Percentage (%)**
Unable to fit clothing before buying	130	65.0
Disregard from shopkeepers	39	19.0
Clothing does not fit well sometimes	26	13.0
Difficulty in taking clothing on and off	6	3.0

4.1.4 Respondent Satisfaction with General Clothing Attributes

The table 6 shows a descending order of dissatisfaction by the respondents with most of the attributes on the ready-made garments. This ranged from Durability, with 94% of respondents, to Attractiveness, about 91%, down to Colour, with about 50% of the respondents. With the rest of the attributes, the respondents were generally undecided. Those were Construction quality, Protection, Usability, Size, and Fabric quality, ranging from 94% to 61%. It was only a few respondents who were satisfied with some clothing attributes; the highest being 27% and the lowest being 1.5% of the respondents.

Table 6

Satisfaction Levels of Ready-Made Garment to PWMIs

General Clothing Attribute	**Dissatisfied**		**Undecided**		**Satisfied**	
	F	%	F	%	F	%
Durability	189	94.0	11	5.5	1	0.5
Attractiveness	182	90.5	10	5.0	9	4.5
Managing fasteners and zippers	179	89.1	11	5.5	11	5.5
Movement	177	88.0	12	6.0	12	6.0
Easy to put on and take off	159	79.1	20	10.0	22	10.9
Comfort	145	72.1	56	27.9		
Style	117	88.1	24	11.9		
Fit	107	53.2	85	42.3	9	4.5
Colour	100	49.8	100	49.8	1	0.5
Fabric Quality	76	37.8	124	61.7	1	0.5
Size	59	29.4	142	70.6		
Usability	39	19.4	162	80.6		
Protection	23	11.4	123	61.2	55	27.4
Construction Quality	12	6.0	189	94.0		
Grand mean						2.30

In response to the interview questions, the respondents said, *"*We do not get ready-made garments that give us a good fit because of our physical conditions*"*. They indicated that "wearing and removal of garments most at times become very difficult as some of the features of the garments as well as fasteners do not allow for easy wearing and removal". They further indicated that

> *"Sometimes, some of the features would have to be altered before the garment can be used, which sometimes destroys the attractiveness of the garment. Especially when it happens to do with the alterations ourselves by cutting to reduce the length of trousers, long sleeves, and dresses; however, we find it difficult to neaten the edges of the garment, making it unattractive".*

4.2 Discussion

Most PWMIs expressed dissatisfaction with ready-made garment attributes, while a few remained neutral or satisfied with some aspects. Attributes that PWMIs were dissatisfied with included; durability, attractiveness, managing fasteners and zippers, movement, ease to put on and take off, comfort, style, fit, and colour.

PWMIs' satisfaction levels of attributes of ready-made garments revealed that 18 9(94.0%) of them were dissatisfied with the garments' durability. This finding of the study conforms to the findings of Simpson (2018) that people with mobility impairments, more often than not, use assistive devices such as wheelchairs, crutches, walkers, braces, and special lifts as well as those who crawl on the floor. Leary (2019) also indicated that since garments used by these individuals are mostly not customized to meet their needs, as far as the fabric choice is concerned, there is the likelihood that they might suffer wear and tear due to abrasion of these devices and contact surfaces. This means that durability should be a major concern to PWMIs when they are buying ready-made garments in the Ghanaian market.

On the attribute of attractiveness, a Greater number, 182(90.5%) of the respondents reported that the clothes they wear do not look attractive on them. This was in line with what the respondents said during the interview. This also confirms what McBee-Black and Ha-Brookshire (2018) said, that since the convention has been that people with physical needs differ from the norm, it creates the impression that they have been side-lined in favour of the mainstream body, when it comes to clothing production. This actually calls on policy makers and advocates to call for inclusive design policies in Ghana.

Again, most of the respondents 179(89.1) were dissatisfied with the attribute of managing fasteners and zippers, and this finding is in line with the works of Reich and Shannon (1980); Watkins and Dunne (2015), that fasteners may be the most difficult clothing issue for people with disabilities to deal with. They observed that, when hand dexterity is reduced, small buttons, hooks eyes, and zippers can be difficult to use. Openings and closures are functional in nature and the type, location, and number of these features might be very necessary to people with limited mobility as they provide easy access for donning and doffing, independence, and self-confidence to such individuals. However, these are not considered in the production phase of the general clothing in Ghana. Therefore, garment manufacturers in Ghana should establish a clothing line where adaptive features like magnetic fasteners and adjustable waistbands, will be included for PWMIs.

Moreover, the majority, 177(88.0%) of the respondents expressed dissatisfaction with the attributes of movement in their ready-made garments. According to Watkins and Dunne (2015) movement in clothing is important to its function. He further stated that there are two basic approaches to increasing mobility in clothing. The first is by selecting a fabric that moves easily with the body and the second is by designing a garment that promotes mobility. Ideally, both approaches need to be used to maximize mobility in the garments of persons with mobility impairments, since physical movement is already a challenge for these people in the country

It is affirmed by Kabel et al. (2017), that medical devices like leg braces, colostomy bags, and catheters (internal assistive devices) can be covered by clothing whilst external assistive devices such as wheelchairs, crutches, and walkers that cannot be concealed by clothing, safety must be considered to prevent injury to the body and embarrassment in the movement of people with mobility impairment. Not achieving this functional role in ready-made garments might be a problem since limited mobility individuals are not considered in the production of general garments in Ghana.

On the attribute of Easy to put on and take off in the ready-made garments, 159(79.1%) respondents were dissatisfied. This result finding is confirmed by Mahoney et al. (2015) that, the dressing of the disabled can be more complex when fatigue or agitation is a factor added to it. Garments for people with disability should be designed in such a way that they can don and doff their garments as independently as possible. However, since general garments are made without considering disability figures, there is the belief that the donning and doffing process might pose greater challenges for these marginalized, generally denying them the independence in dressing that can enhance their quality of life.

It is also affirmed by Stokes and Black (2012) that to don and doff clothing, a considerable amount of coordination, sensation, dexterity, balance, range of motion, and muscular strength is required. If a garment is made without considering these factors of individuals with mobility impairment, donning and doffing might be a challenge for such individuals, especially in Ghana, where there is no clothing line to meet their physical conditions.

Again, a greater number of the respondents 145(72%) expressed dissatisfaction with the attribute of comfort in their ready-made garments. This result is supported by Watkins and Dunne (2015) that any negative reactions to a garment and the way it looks, can lead to feelings of discomfort. Kamalha et al. (2013) describe three dimensions of comfort in garments which include physical, psychological, and social comfort. Physical comfort is described as satisfaction with physical attributes such as garment bulk, weight, and texture. Psychological comfort is the psychological satisfaction with the desired affective states like femininity or elegance. This can impact the wearer's sense of self and feeling of enhancement. The third dimension, which is social comfort, is expressive of the appropriateness of one's clothing to an occasion or event. It can also be the satisfaction with the degree of desired conformity to the dress of peers.

According to Aklamati et al. (2016), the comfort of clothing depends on appropriate fit. They further noted that aesthetic and functional factors play vital roles in determining clothing fit as well as the ease of the garment. Therefore, the fit must be designed into the original pattern to provide fullness at appropriate locations to accommodate body bulges in a flattering manner (Pandey & Chawla, 2018). Evidence shows that good customized fit, is dependent on the art of garment pattern and pattern grading incorporating various shapes and proportions of the individual customer (Jhanji, 2018). It is extremely difficult to assess the fit quality without first defining the expected garment-to-body fit relationship. Most sizing systems use an incremental or proportional approach when grading patterns up and down to produce a range of sizes (Gill, 2015). This approach is problematic when trying to accommodate a populace with an infinite variety of body shapes and proportions like people with disability. Therefore, if the body dimensions of mobility-impaired individuals are not considered in the pattern-making process of the ready-made garments in Ghana, appropriate fit cannot be achieved and it will decrease the comfort that this marginalized group is looking for in their clothing like any other clothing consumer.

On the attribute of Style of ready-made garments, 117(88.1%) of the respondents expressed dissatisfaction. The result is supported by Kabel et al. (2017) that functional clothes that follow fashion trends are important for people with disabilities. However, garments that are available in the market for this consumer segment do not look trendy, and therefore do not achieve the aesthetic needs of these individuals. Since their body dimensions are not considered in the production phase of the garment.

A very good number of 107(53.2%) of the respondents showed dissatisfaction with the attribute of Fit in ready-made garments. This agrees with the findings of Sidberry (2011) that, for a person to fit comfortably into a garment, that garment must have the correct size and shape of the client. However, the body shape of the mobility impaired is contrary to the traditional body measurement used in the production of the general garments in the country, which of course are produced without having this non-traditional body type in mind. This implies that the ready-made garments available in the Ghanaian market would not be a good fit for the disabled group.

It was also revealed in the study that, 100(49.8%) of the respondents were dissatisfied with the attribute of colour in ready-made garments. This affirms the work of Kamalha et al. (2013) that the psychological needs of these individuals may be met through the use of attractive colours, functional and fashionable design, as well as interesting textures. McBee-Black et al. (2018) on the other hand, stated that clothing helps to minimize the appearance of disability, and therefore, it is even more necessary for the physically impaired to select appropriate clothing to appear neat and well-groomed. But all these factors are well missed in the production process of ready-made garments in Ghana. Therefore, there is a need to restore the functionality of clothing as well as fashion needs in the lives of PWMIs in Ghana, and this will be possible if fashion educators will be ready to train designers to create adaptive clothing for such individuals

On the other hand, the majority of the respondents were indifferent or indecisive on a few of the attributes; construction quality, usability, size, fabric quality, and protection with figures ranging from; 189(94.0%), 162(80.6%), 142(70.6%), 124(61.7%) and 123(61.2%) respectively. Clothing has become more than protection and adornment for people with disability; it satisfies deep psychological needs by providing satisfying experiences (Kamalha et al., 2013). The indecisive position of the respondents on the above attributes in ready-made garments might be due to inadequate information about their clothing needs. Thus, not adequate information about the functional, expressive, and aesthetic roles of clothing in the lives of persons with mobility impairments. As it was identified in the study, clothing awareness among people with disability has not been much researched in Ghana, countries that have researched the subject, have only dwelt on the need for adequate and comfortable clothing for such individuals. Lobo et al. (2019) stated that the use of clothing has been identified as one of the rehabilitating tools for people with disability. Clothing has become more than protection and adornment for people with disability; it satisfies deep psychological needs by providing satisfying experiences (Kamalha et al., 2013). According to Kabel et al. (2017), clothing for people with disability should not set them apart from society, rather, efforts should be made to help them conform to society in as many ways as possible.

On the option of satisfaction of the attributes, only a few respondents expressed satisfaction with some clothing attributes with the highest being 55(27.4%) and the lowest being 1(1.5%) of the respondents. This agrees with (Savino et al., 2014) that, mobility impairment ranges in severity from limitations of stamina to paralysis. How much a person

can dress himself/herself is determined by the severity of the disability. Kabel et al. (2017) also noted that clothing-related problems of the disabled are highly individualized because these depend on the type of disability the person is having. Therefore, these few individuals might have some sort of satisfaction from a few of the attributes of ready-made garments due to the type of disability they have. However, a grand mean of 2.30 (M<3.0), respondents were generally dissatisfied with ready-made garments, indicating a need for improvement in their garment designs.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

From the findings of the study, it was concluded that PWMIs are not satisfied with the ready-made garment. A grand mean of 2.3 showed the general dissatisfaction with ready-to-wear garments by PWMIs in the KEEA Municipality in the Central Region. The attributes that make them dissatisfied include durability, attractiveness, managing fasteners and zippers, movement, style, ease of putting off putting on and taking off, comfortability, fit, and colour of the garments. These were the more reasons why most of them opted for alterations in their ready-made garments before using them as indicated in the results. The findings of the study are to create awareness in the PWMIs who are marginalized in Ghanaian society, that some of their mobility challenges can be resolved through clothing designs. The study again is to gather the information that would be needed by designers and manufacturers in Ghana to have a clothing line that would concentrate on a mobility lifestyle to produce to meet the needs and interests of PWMIs in the country. Moreover, the study would fill up the gap in the existing literature that fails to address the clothing needs of these marginalized groups in Ghana.

5.2 Recommendations

The study recommends that Persons with Mobility Impairments (PWMIs) should be educated on how to choose clothing that meets their unique needs, with emphasis on key attributes such as comfort, durability, ease of wearing, and proper fit. Furthermore, interested agencies and organisations for persons with disabilities should advocate for policies that encourage clothing industries to consider and address the specific clothing needs of this group, ensuring that their products promote greater comfort, accessibility, and inclusion.

5.3 Limitation of the Study

The inability of most respondents to read and fill the questionnaire posed some difficulties, since the items were read and interpreted to them before answering the questions. But effort was made by the research team to do careful interpretations to overcome the challenge. Again, some handful of the respondents felt reluctant to participate, others did not open up in giving clear pictures of their conditions, but greater number of the respondents participated fully to make the exercise very successful and that, the result could be used to ascertain the fact.

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